

Remarks

Reconsideration of this Application is respectfully requested.

Claims 1, 2, 9-11 and 20-36 are pending in the application, with claims 1 and 9 being the independent claims. Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

On page 2 of the Office Action, claims 1, 9-11, and 20-36 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2001/0033611 to Grimwood *et al.* ("Grimwood"). Applicants respectfully traverse.

In rejecting independent claim 1, the Examiner contended that Grimwood disclosed all elements of claim 1. Applicants respectfully disagree with the Examiner's position for at least the following reasons.

Independent claim 1 recites:

...
transmitting a first downstream signal using the first downstream transmitter in the central entity to the one or more remote devices . . .;

...
transmitting a second downstream signal using the second downstream transmitter in the central entity to the one or more remote devices

Grimwood does not disclose all elements of claim 1. For example, Grimwood fails to disclose "transmitting a second downstream signal using the second downstream transmitter in the central entity."

First, Grimwood's Central Unit (CU) has only one downstream transmitter. Although the Examiner points to Paragraph [0012] of Grimwood as showing a second

downstream transmitter, paragraph [0012] does not specify any number of downstream transmitters in the CU. It simply states that downstream data is transmitted by the CU. (*See, e.g.*, Grimwood, [0012] stating “downstream data transmitted by the CU”). Elsewhere, however, Grimwood describes a CU having only a single transmitter. (*See, e.g.*, Grimwood, [0019] stating “. . . to the RU to adjust its transmitter.”); [0265] referring to “the CU transmitter”). Furthermore, no figure shows the existence of two downstream transmitters in the CU. (*See, e.g.*, Grimwood, FIGs. 1, 2, and 4).

Second, the Examiner mischaracterizes the RU as having a downstream transmitter and transmitting data downstream. (*See, e.g.*, page 4 of the Office Action: “transmitting a second downstream signal (data transmitted by the RU from the downstream clock, paragraph [0012] . . . start of RU transmission) . . . ”). RUs, however, do not transmit downstream. RUs transmit upstream using upstream transmitters.

The communication path from the CMTS to the cable modems is typically referred to as the downstream, while the communication path from the cable modems to the CMTS is typically referred to as the upstream.

(Specification, [0002]). Thus transmissions from a central unit to a remote unit are “downstream.” Transmissions from the remote unit to the central unit are “upstream.” Grimwood’s FIGs. 1, 2, and 4 similarly use this conventional terminology. Applicants point in particular to Grimwood’s FIG. 4, illustrating DOWNSTREAM MODULATOR 180, DOWNSTREAM DEMODULATOR 186, S-CDMA UPSTREAM MODULATOR 196, and S-CDMA UPSTREAM DEMODULATOR 214. See also Grimwood at [0003] and [0004] for use of the terms upstream and downstream in context.

Third, the Examiner mischaracterizes the “downstream clock” within the RU. Grimwood does not disclose a “downstream clock” that transmits data. On the contrary,

within Grimwood's RU, the "downstream clock" is a signal recovered from the downstream data transmitted by the CU's single downstream transmitter. For example, see Grimwood, [0012], specifically page 2, lines 7-8: "a downstream symbol clock which is recovered from the downstream data transmitted by the CU." See also page 2, lines 26-30 and lines 38-42. Thus, in the CU, a downstream symbol clock signal is generated and incorporated into the downstream signal, which is transmitted by the CU's single downstream transmitter. In the RU, the downstream clock signal is recovered from the received downstream signal:

In an RU, the signal on shared media 30 is demodulated by demodulator 32 using a synchronized local carrier on line 40 generated by synthesizer 38 from a local clock signal on line 39 generated from a divide by 2 clock divider circuit 41 which may take the form of a PLL. The local downstream carrier on line 40 is therefore generated from the recovered downstream clock on line 43 which is phase coherent with master clock in the CU. The clock steering signal is generated from downstream barker codes detected by SCDMA demodulator 36. The SCDMA demodulator uses a local clock on line 42 generated by a times 2 frequency clock multiplier circuit 44 from the recovered master clock signal on line 43. The recovered downstream data is output on line 46.

(Grimwood, [0049], discussing FIG. 1). Therefore, Grimwood's "downstream clock" does not transmit data as alleged by the Examiner.

Thus, nowhere does Grimwood teach or suggest "transmitting a second downstream signal using the second downstream transmitter in the central entity." For at least these reasons, independent claim 1 is patentable over Grimwood. Reconsideration and allowance of claim 1 is respectfully requested.

Independent claim 9 includes a similar feature, "a second downstream transmitter configured to transmit a second downstream signal to the one or more remote devices, wherein the second downstream signal includes second timing information based on a second symbol clock of the second downstream transmitter." For reasons similar to

those above, claim 9 is patentable over Grimwood. Reconsideration and allowance of claim 9 is respectfully requested.

Dependent claims 20-27 depend from independent claim 1. Dependent claims 10, 11, and 28-36 depend from claim 9. For at least the reasons above, and further in view of their own features, dependent claims 10, 11, and 20-36 are patentable over the cited reference. Accordingly, Applicants respectfully request consideration and allowance of claim 10, 11, and 20-36.

Rejections under 35 U.S.C. § 103

On pages 9-10 of the Office Action, claim 2 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Grimwood in view of U.S. Patent No. 6,539,050 to Lee *et al.* (“Lee”). Applicants respectfully traverse.

As discussed above, Grimwood fails to teach or suggest “transmitting a second downstream signal using the second downstream transmitter in the central entity to the one or more remote devices” as recited in independent claim 1. Lee fails to remedy this deficiency in Grimwood. The Examiner has not asserted otherwise. For at least these reasons, claim 1 is patentable over the cited references. Claim 2 depends from claim 1. Thus, for at least the above reason, and further in view of its own features, claim 2 is patentable over the cited references. Accordingly, Applicants respectfully request consideration and allowance of claim 2.

Other Matters

Applicants renew previous arguments presented in previous replies. In the instant reply, however, Applicants wish to focus the Examiner's attention on the above described fundamental differences between Grimwood and the claimed invention.

Applicants also respectfully request the Examiner address Applicant's arguments. In the current Office Action, the Examiner states that "Applicants arguments filed April 10, 2009 have been considered. But, in view of the new grounds of rejection due the amended and newly added claims, the arguments are moot." The Examiner's rejection of the independent claims in the instant Office Action, however, remain substantially identical to those in the Office Action dated December 30, 2008.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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